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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/904,067 | 07/11/2001 | Asad M. Madni | 09081.0005 | 1896 |

7590 07/03/2002

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EXAMINER

DAVIS, OCTAVIA L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2855

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/904,067

Applicant(s)
Madni et al

Examiner
Octavia Davis

Art Unit
2855



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Serial Number: 09/904, 067

Art Unit: 2855

6/13/02

DETAILED ACTION

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Specification

The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 - 8 are rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

In claim 1, it is not clear which “ said cage shielding portions of said spokes ” this is referring to.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes et al in view of Lustenberger. Stokes et al disclose a variable capacitance transducer comprising a dielectric member 42 having a circular disk shape and

including non-truncated segment portions, the dielectric member 42 mounted for rotation with a first half of a shaft 39, a pair of sensor plates 50, 52 lying in a common plane encircling a first half of the shaft 39, an opposed capacitor plate 51 encircling the second shaft half and electrical bridge means for comparing the capacitances formed between the pair of sensor plates 50, 52 and the opposed capacitor plate 51 (See Cols. 8 and 9, lines 44 - 67 and 12 - 65) (cl 1), the ring-type sensor plates 51, 52 having equal areas (cl 4) and the apertured conductive disk including apertures arranged in concentric rings matching the first and second concentric plate rings which encircle the first shaft half, the apertures alternating with solid conductive portions around a circle, the concentric rings being offset from one another by 180 degrees (cl 5) but does not disclose a pair of first and second apertured conductive disks caging said dielectric disk and mounted for rotation with the second half of the shaft, a pair of concentric capacitor plate rings lying in a common plane encircling the first half of the shaft and juxtaposed with the first apertured conductive disk and an opposed capacitor plate encircling the second shaft half and juxtaposed with the second apertured conductive disk (cl 1), the apertured conductive disks having identical aperture patterns which are aligned with each other (cl 2), the apertured conductive disks being electrically connected together (cl 3), the spokes radially extending to cover a portion of an aperture on each concentric ring (cl 6), under zero torque condition, one half of each aperture is covered by each spoke to provide

equal values of capacitance (cl 7) and when applied torque is a maximum in one rotational direction the apertures of one ring are covered and the other ring apertures are minimally covered, with applied maximum torque in the opposite direction the opposite covering of apertures occurs (cl 8). However, Lustenberger discloses a torque measuring device comprising a pair of first and second apertured conductive disks 3, 4 caging a dielectric disk which is mounted for rotation with a second half of a shaft 11, a pair of concentric capacitor plate rings 17, 18 juxtaposed with the first apertured conductive disk 3 and an opposed capacitor plate juxtaposed with the second apertured conductive disk 4, each disk having a plurality of spokes 5, 6 (See Col. 2, lines 47 - 65) (cl 1), the apertured conductive disks 3, 4 having identical aperture patterns which are aligned with each other (cl 2), the apertured conductive disks 3, 4 being electrically connected together (cl 3), the spokes 5, 6 radially extending to cover a portion of an aperture on each concentric ring 17 (cl 6), under zero torque condition, one half of each aperture is covered by each spoke 5, 6 to provide equal values of capacitance (See Col. 2, lines 59 - 62) (cl 7) and when applied torque is a maximum in one rotational direction the apertures of one ring are covered and the other ring apertures are minimally covered, with applied maximum torque in the opposite direction the opposite covering of apertures occurs (See Col. 2, lines 62 - 68) (cl 8).

Therefore, it would be obvious to one of ordinary skill in the art at the time the

invention was made to modify Stokes et al according to the teachings of Lustenberger for the purpose of, providing an angle of torsion measuring device that is of simple design and that has the advantage of being stable with respect to the temperature.

Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (703) 306 - 5896. The examiner can normally be reached on Monday - Friday (9:00 - 5:00), alternate Mondays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0956.

OD

OD/2855



Benjamin R. Fuller
Supervisory Patent Examiner
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